



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Tatsuhiko Kodama et al.      Art Unit : Unknown  
Serial No. : 10/550,987 ✓      Examiner : Unknown  
Filed : September 26, 2005  
Title : ANTIBODIES THAT INHIBIT TRANSPORT ACTIVITY OF PEPTIDE  
TRANSPORTERS

**MAIL STOP AMENDMENT**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

INFORMATION DISCLOSURE STATEMENT

Applicants request consideration of the references listed on the attached PTO-1449 form. Under 37 C.F.R. § 1.98 (a)(2)(ii), only copies of foreign patent documents and non-patent literature are enclosed. Copies of any listed U.S. patents or published applications can be provided upon request.

Submitted herewith are English translations of foreign language references AI, AJ, AN, AO, and AP. Also enclosed is a brief English summary of foreign language reference AXX. Foreign language reference AK includes an abstract in English. A translation of reference AL is not included because it is a member of the patent family of English language reference AC.

Applicants wish to bring to the Examiner's attention co-pending and co-owned non-provisional application serial numbers 10/492,376 (Attorney Docket No. 14875-129US1), 10/497,900 (Attorney Docket No. 14875-131US1), 10/509,343 (Attorney Docket No. 14875-133US1) and 10/516,603 (Attorney Docket No. 14875-137US1), which have overlapping inventorship with the above-referenced application and concern related subject matter. Applicants assume that the Examiner has ongoing access to the files of these related applications and can obtain copies of prosecution documents from the files if at any point in the future he/she

CERTIFICATE OF MAILING BY FIRST CLASS MAIL

I hereby certify under 37 CFR §1.8(a) that this correspondence is being deposited with the United States Postal Service as first class mail with sufficient postage on the date indicated below and is addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

May 25 2006

Date of Deposit

Signature

Michelle George

Typed or Printed Name of Person Signing Certificate

Applicant : Tatsuhiko Kodama et al.  
Serial No. : 10/550,987  
Filed : September 26, 2005  
Page : 2 of 2

Attorney's Docket No.: 14875-152US1 / C1-A0306P-  
US

considers them potentially relevant to issues in the present application. Applicants will supply copies of such documents from the related applications' files, should the Examiner request them.

This statement is being filed before the receipt of a first Office Action on the merits.

Please apply any charges or credits to Deposit Account No. 06-1050, referencing Attorney Docket No. 14875-152US1.

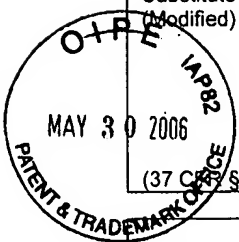
Respectfully submitted,

Date:

May 25, 2006 

Janis K. Fraser, Ph.D., J.D.  
Reg. No. 34,819

Fish & Richardson P.C.  
225 Franklin Street  
Boston, MA 02110  
Telephone: (617) 542-5070  
Facsimile: (617) 542-8906



Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 14875-152US1	Application No. 10/550,987
<b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant Tatsuhiko Kodama et al.	
		Filing Date September 26, 2005	Group Art Unit

### U.S. Patent Documents

Examiner Initial	Desig. ID	Document Number	Publication Date	Patentee	Class	Subclass	Filing Date If Appropriate
	AA	5,849,525	12/15/1998	Hediger			
	AB	6,270,978	08/07/2001	Bright et al.			
	AC	6,713,278	03/30/2004	Bouvier et al.			
	AD	2005/0004227	01/06/2005	Saitoh			
	AE	2005/0222391	10/06/2005	Kodama et al.			
	AF	2005/0281825	12/22/2005	Kodama et al.			
	AG	2006/0084119	04/20/2006	Saitoh et al.			
	AH						

### Foreign Patent Documents or Published Foreign Patent Applications

Examiner Initial	Desig. ID	Document Number	Publication Date	Country or Patent Office	Class	Subclass	Translation	
							Yes	No
	AI	6-261761	09/20/1994	JP			X	
	AJ	11-172	01/06/1999	JP			X	
	AK	97/19919	06/05/1997	WIPO			English abstract	
	AL	98/46777	10/22/1998	WIPO			see AC	
	AM	00/28016	05/18/2000	WIPO				
	AN	03/047621	06/12/2003	WIPO			X	
	AO	03/083116	10/09/2003	WIPO			X	
	AP	03/104453	12/18/2003	WIPO			X	

### Other Documents (include Author, Title, Date, and Place of Publication)

Examiner Initial	Desig. ID	Document
	AQ	Basu et al., "Development and Utility of Anti-PepT1 Anti-Peptide Polyclonal Antibodies", Pharm. Res., 15:338-342 (1998)
	AR	Blissard et al., "Location, Sequence, Transcriptional Mapping, and Temporal Expression of the gp64 Envelope Glycoprotein Gene of the <i>Orgyia pseudotsugata</i> Multicapsid Nuclear Polyhedrosis Virus", Virology, 170:537-555 (1989)
	AS	Friedman et al., "Passive and Carrier-Mediated Intestinal Absorption Components of Two Angiotensin Converting Enzyme (ACE) Inhibitor Prodrugs in Rats: Enalapril and Fosinopril", Pharm. Res., 6:1043-1047 (1989)

Examiner Signature	Date Considered
--------------------	-----------------

EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 14875-152US1	Application No. 10/550,987
<b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary)  (37 CFR §1.98(b))		Applicant Tatsuhiko Kodama et al.	
		Filing Date September 26, 2005	Group Art Unit

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	AT	Friedman et al., "Characterization of the Intestinal Transport Parameters for Small Peptide Drugs", J. Controlled Release, 13:141-146 (1990)
	AU	Ganapathy et al., "Proton-coupled solute transport in the animal cell plasma membrane", Curr. Opin. Cell Biol., 3:695-701 (1991)
	AV	Gonzalez et al., "An Oligopeptide Transporter is Expressed at High Levels in the Pancreatic Carcinoma Cell Lines AsPc-1 and Capan-2", Cancer Res., 58:519-525 (1998)
	AW	Higgins, "ABC Transporters: From Microorganisms to Man", Annu. Rev. Cell Biol., 8:67-113 (1992)
	AX	Knutter et al., "A Novel Inhibitor of the Mammalian Peptide Transporter PEPT1", Biochemistry, 40:4454-4458 (2001)
	AY	Lee et al., "Biopharmaceutics of transmucosal peptide and protein drug administration: role of transport mechanisms with a focus on the involvement of PepT1", J. Controlled Release, 62:129-140 (1999)
	AZ	Lindley et al., "Production of monoclonal antibodies using recombinant baculovirus displaying gp64-fusion proteins", J. Immunol. Methods, 234:123-135 (2000)
	AAA	Loisel et al., "Recovery of homogeneous and functional $\beta_2$ -adrenergic receptors from extracellular baculovirus particles", Nat. Biotechnol., 12:1300-1304 (1997)
	ABB	Mangor et al., "A GP64-Null Baculovirus Pseudotyped with Vesicular Stomatitis Virus G Protein", J. Virol., 75:2544-2556 (2001)
	ACC	Mikhailov et al., "Expression of functionally active ATP-sensitive K-channels in insect cells using baculovirus", FEBS Lett., 429:390-394 (1998)
	ADD	Mrsny, "Oligopeptide Transporters as Putative Therapeutic Targets for Cancer Cells", Pharm. Res., 15:816-818 (1998)
	AEE	Muranushi et al., "Transport Characteristics of Ceftibuten, a New Oral Cephem, in Rat Intestinal Brush-Border Membrane Vesicles: Relationship to Oligopeptide and Amino $\beta$ -Lactam Transport", Pharm. Res., 6:308-312
	AFF	Nakanishi et al., "Cancer Cell-Targeted Drug Delivery Utilizing Oligopeptide Transport Activity", Int. J. Cancer, 88:274-280 (2000)
	AGG	Nakashima et al., "Kinetics and Mechanism of <i>In Vitro</i> Uptake of Amino- $\beta$ -Lactam Antibiotics by Rat Small Intestine and Relation to the Intact-peptide Transport System", Biochem. Pharmacol., 33:3345-3352 (1984)
	AHH	Noe et al., "Characterization of the Mouse Bile Salt Export Pump Overexpressed in the Baculovirus System", Hepatology, 33:1223-1231 (2001)
	AII	Ogihara et al., "Immuno-Localization of $H^+$ /Peptide Cotransporter in Rat Digestive Tract", Biochem. Biophys. Res. Commun., 220:848-852 (1996)
	AJJ	Okano et al., " $H^+$ Coupled Uphill Transport of Aminoccephalosporins via the Dipeptide Transport System in Rabbit Intestinal Brush-border Membranes", J. Biol. Chem., 261:14130-14134 (1986)
	AKK	Sai et al., "Immunolocalization and pharmacological relevance of oligopeptide transporter PepT1 in intestinal absorption of $\beta$ -lactam antibiotics", FEBS Lett., 392:25-29 (1996)
	ALL	Sai et al., "Selective Delivery of Peptide Anticancer Drugs Via Oligopeptide Transporter Expressed in Cancer Cells", Millennium World Congress of Pharmaceutical Sciences, 61:2-2124 (2000)

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	

Substitute Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney's Docket No. 14875-152US1	Application No. 10/550,987
<b>Information Disclosure Statement by Applicant</b> (Use several sheets if necessary) (37 CFR §1.98(b))		Applicant Tatsuhiko Kodama et al.	
		Filing Date September 26, 2005	Group Art Unit

Other Documents (include Author, Title, Date, and Place of Publication)		
Examiner Initial	Desig. ID	Document
	AMM	Saito et al., "Cloning and Characterization of a Rat H <sup>+</sup> /peptide Cotransporter Mediating Absorption of $\beta$ -Lactam Antibiotics in the Intestine and Kidney", J. Pharmacol. Exp. Ther., 275:1631-1637 (1995)
	ANN	Saito et al., "Molecular cloning and tissue distribution of rat peptide transporter PEPT2", Biochim. Biophys. Acta., 1280:173-177 (1996)
	AOO	Sakaguchi et al., "The Ion Channel activity of the Influenza Virus M <sub>2</sub> Protein Affects Transport through the Golgi Apparatus", J. Cell. Biol., 133:733-747 (1996)
	APP	Satoi et al., "Genetic Immunization of Wild-Type and Hepatitis C Virus Transgenic Mice Reveals a Hierarchy of Cellular Immune Response and Tolerance Induction against Hepatitis C Virus Structural Proteins", J. Virol., 75:12121-12127 (2001)
	AQQ	Shen et al., "Localization of PEPT1 and PEPT2 proton-coupled oligopeptide transporter mRNA and protein in rat kidney", Am. J. Physiol., 276:F658-665 (1999)
	ARR	Steiner et al., "The PTR family: a new group of peptide transporters", Mol. Microbiol., 16:825-834 (1995)
	ASS	Strehlow et al., "Retroviral membrane display of apoptotic effector molecules", Proc. Natl. Acad. Sci. USA, 97:4209-4214 (2000)
	ATT	Sugano et al., "Quantitative Structure-Intestinal Permeability Relationship of Benzamidine Analogue Thrombin Inhibitor", Bioorg. Med. Chem. Lett. 10:1939-1942 (2000)
	AUU	Sun et al., "Drug Inhibition of Gly-Sar Uptake and hPepT1 Localization using hPepT1-GFP Fusion Protein", AAPS Pharmsci., 3:1-9 (2001)
	AVV	Szakacs et al., "Characterization of the ATPase Cycle of Human ABCA1: Implications for its Function as a Regulator Rather Than an Active Transporter", Biochem. Biophys. Res. Commun., 288:1258-1264 (2001)
	AWW	Takahashi et al., "Interaction of $\beta$ -Lactam Antibiotics with H <sup>+</sup> /peptide Cotransporters in Rat Renal Brush-Border Membranes", J. Pharmacol. Exp. Ther., 286:1037-1042 (1998)
	AXX	Terada et al., "Peptide Transporter Family", Tanpakushitsu Kakusan Koso., 46:621-628 (2001) (English summary provided)
	AYY	Terada et al., "Characterization of Stably Transfected Kidney Epithelial Cell Line Expressing Rat H <sup>+</sup> /Peptide Cotransporter PEPT1: Localization of PEPT1 and Transport of $\beta$ -Lactam Antibiotics", J. Pharmacol. Exp. Ther., 281:1415-1421 (1997)
	AZZ	Zhou et al., "Characterization of an oligopeptide transporter in renal lysosomes", Biochim. Biophys. Acta., 1466:372-378 (2000)

Examiner Signature	Date Considered
EXAMINER: Initials citation considered. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.	